



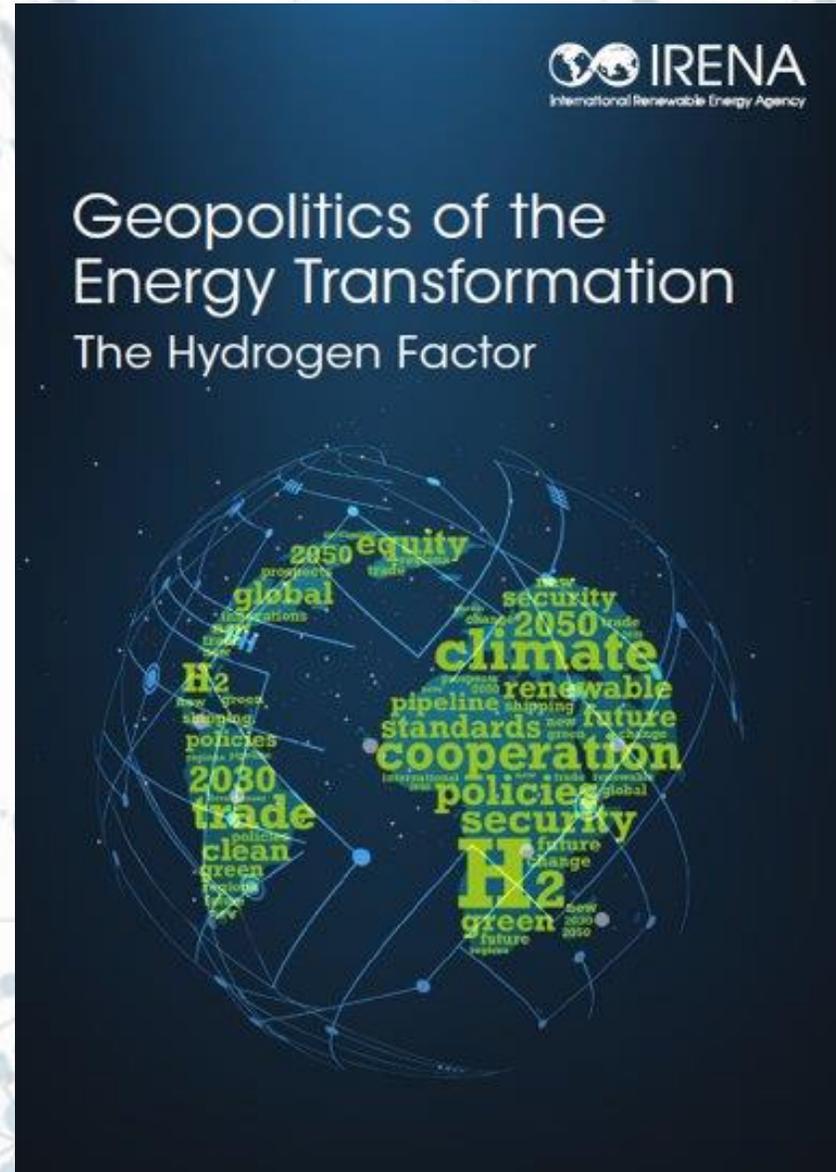
Twelfth Session of the Assembly

The Geopolitics of the Energy Transformation: The Hydrogen Factor

Francesco La Camera
IRENA Director-General

15 January 2022 | Abu Dhabi

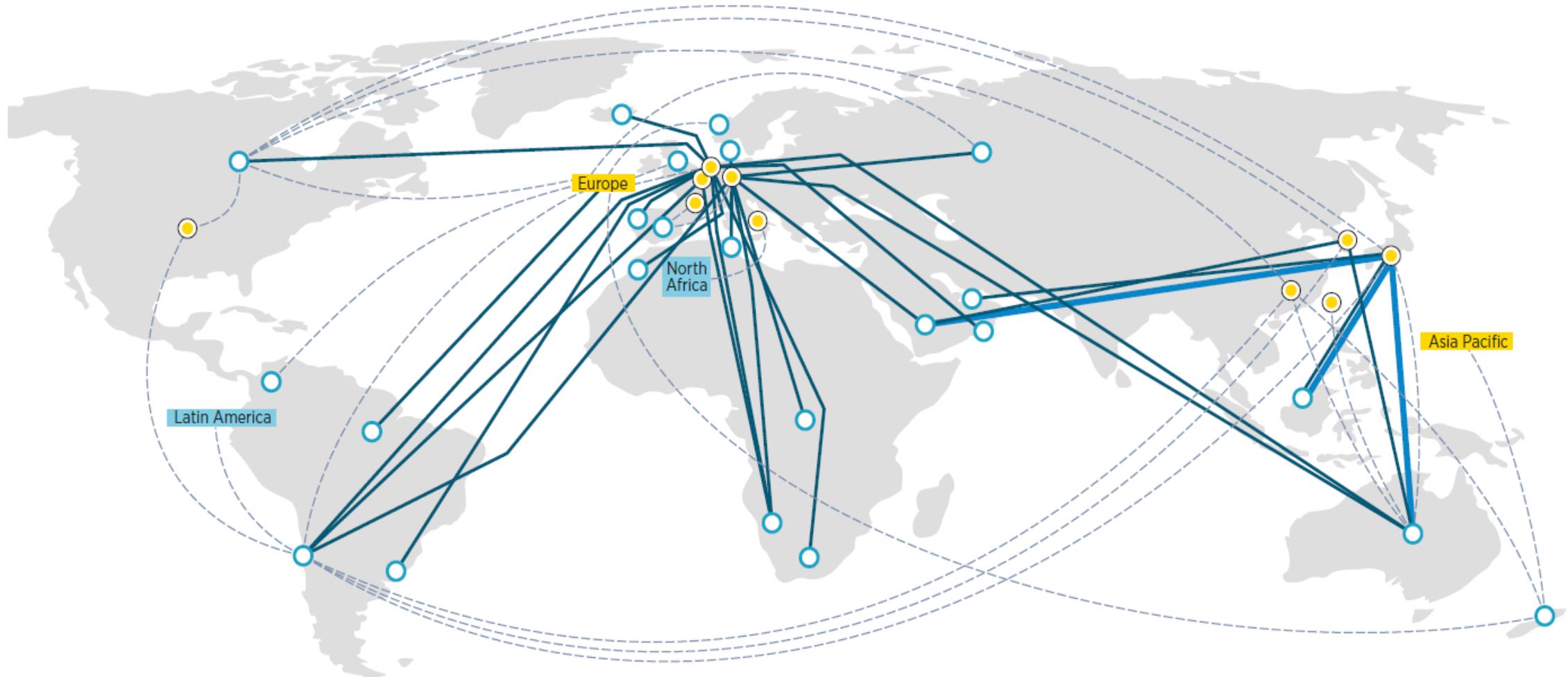
#IRENA12A #ChooseAction



Hydrogen Strategies (October 2021)



An expanding network of hydrogen trade routes, plans and agreements



○ Exporter

Exporting region

— New routes in place or under development

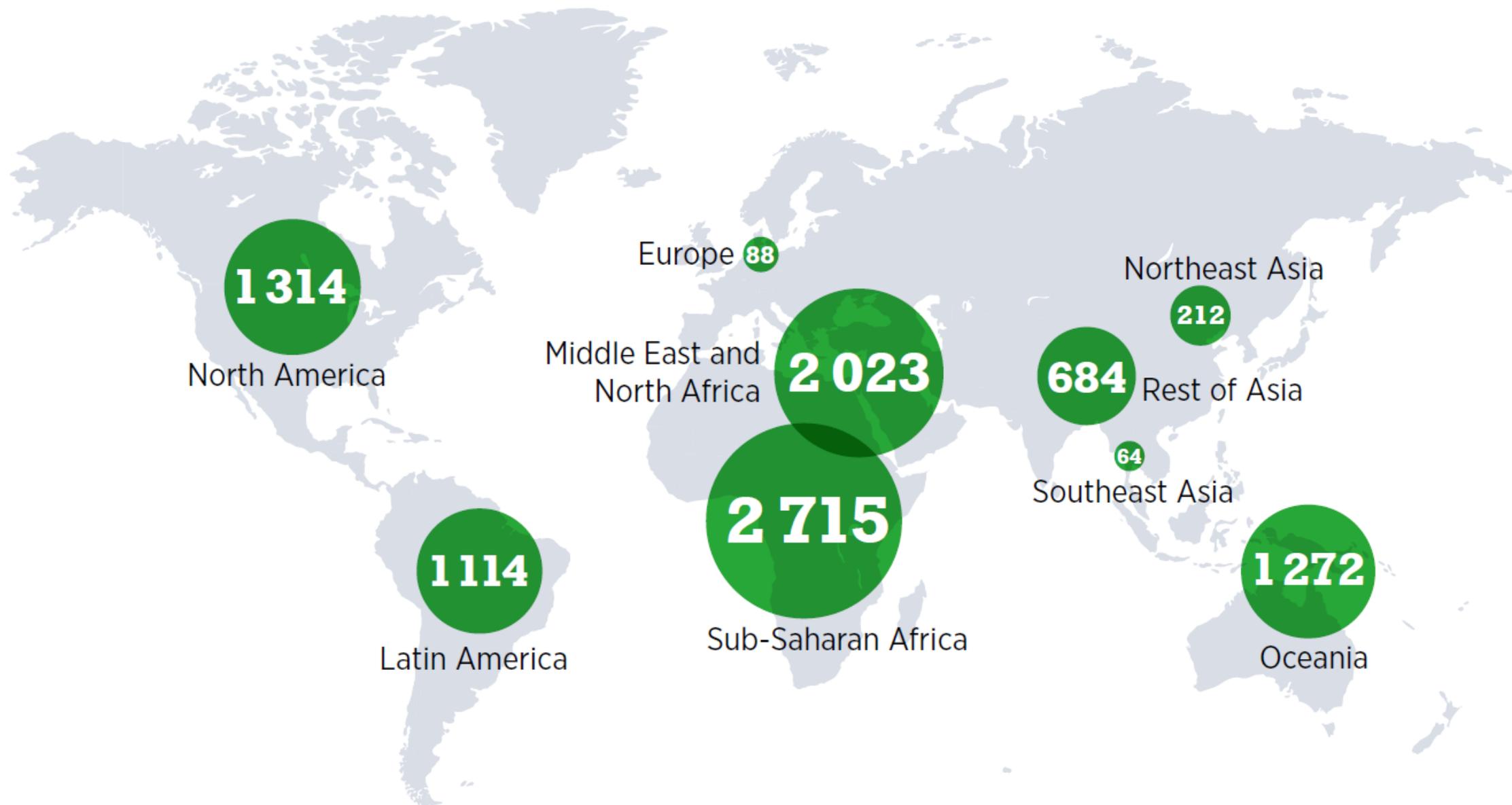
— MoUs in place establishing trade routes

- - - Potential trade route explicitly mentioned in published strategies

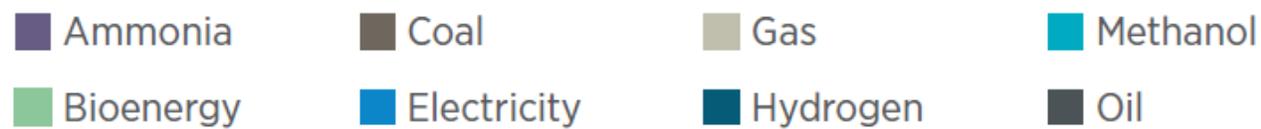
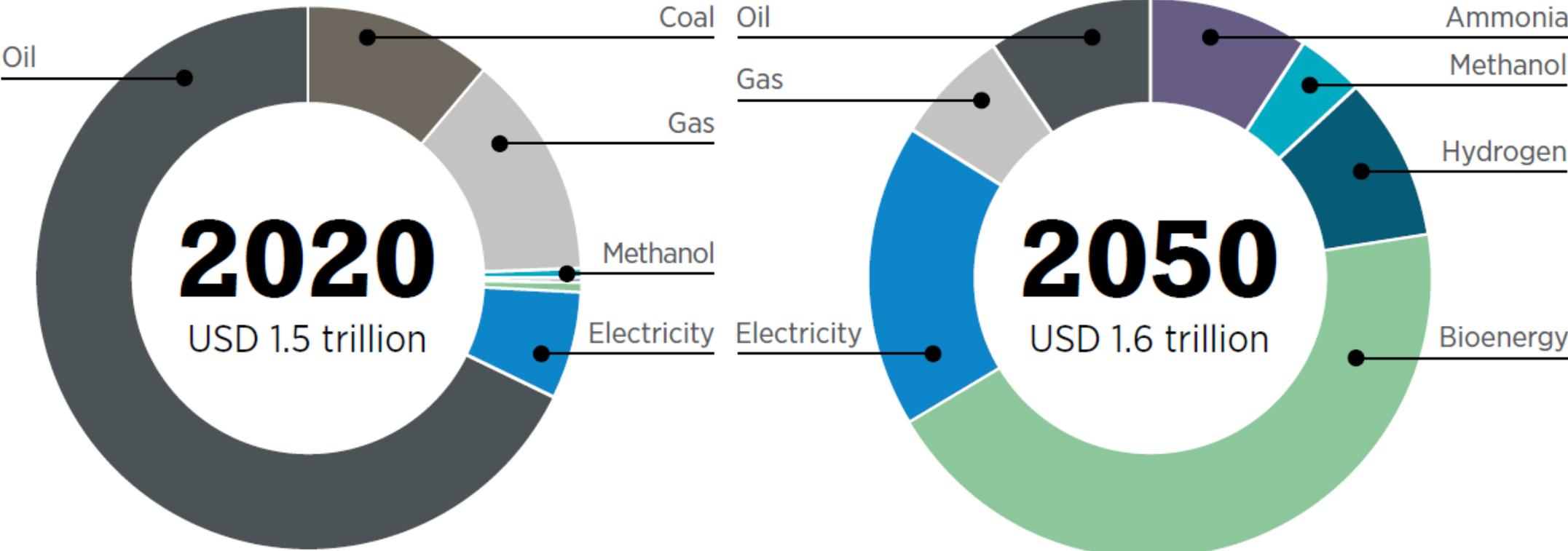
○ Importer

Importing region

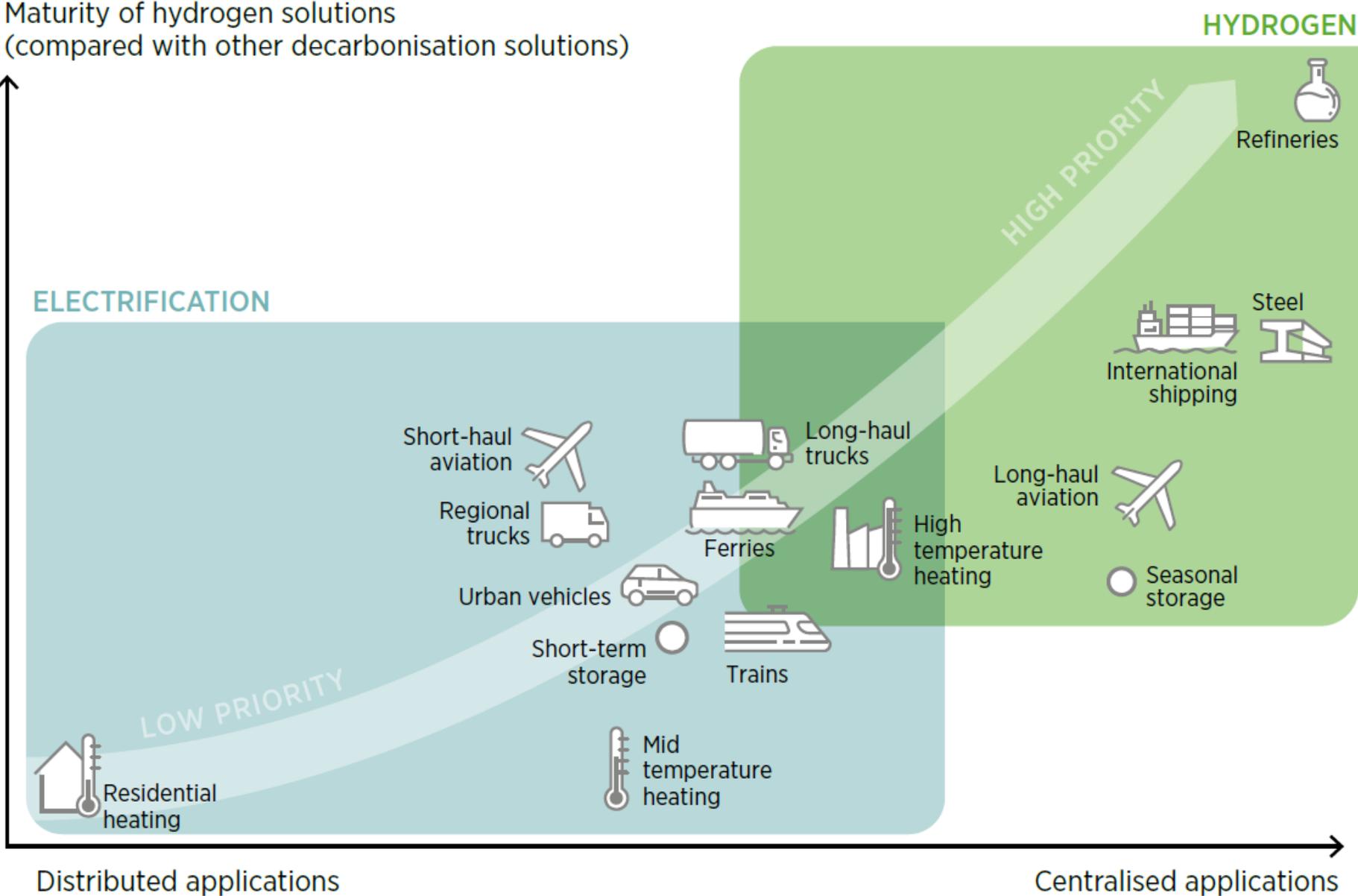
Technical potential for producing green hydrogen under USD 1.5/kg by 2050, in EJ



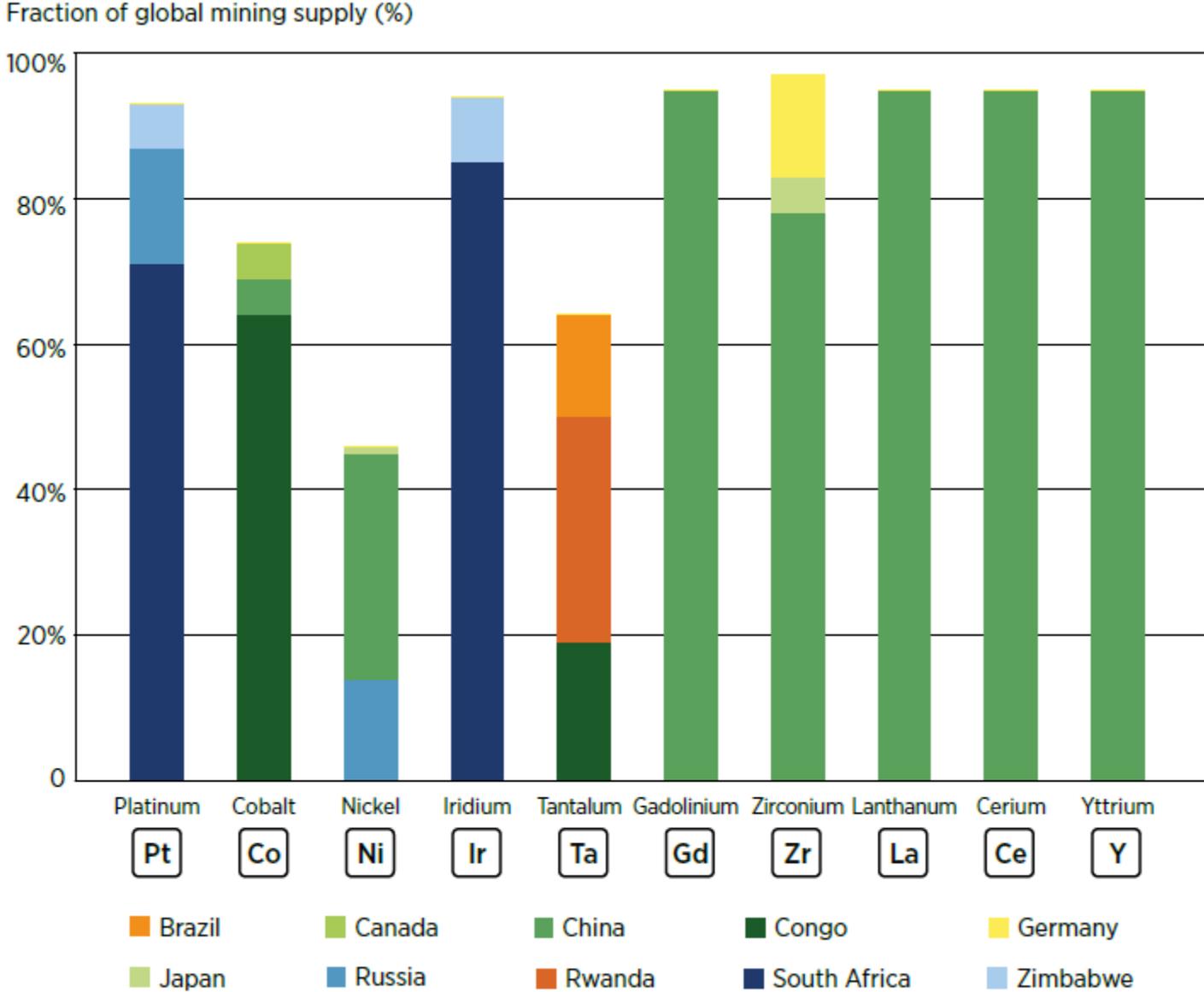
Shifts in the value of trade in energy commodities, 2020 to 2050



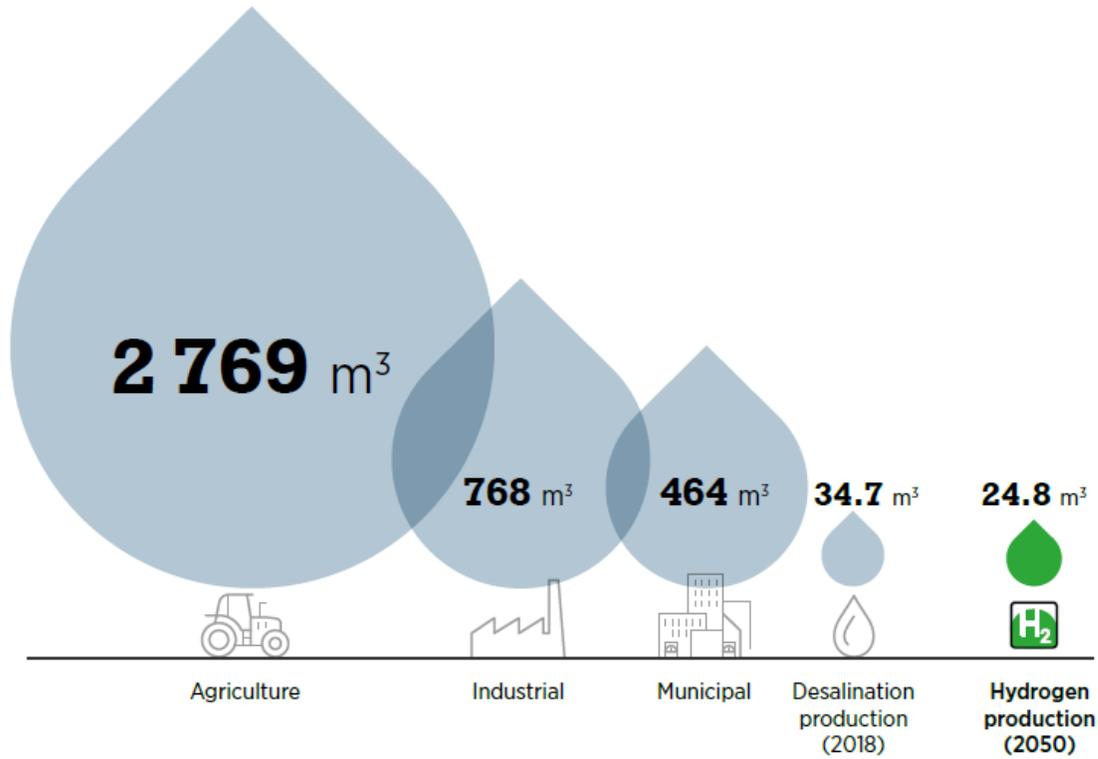
Clean hydrogen policy priorities



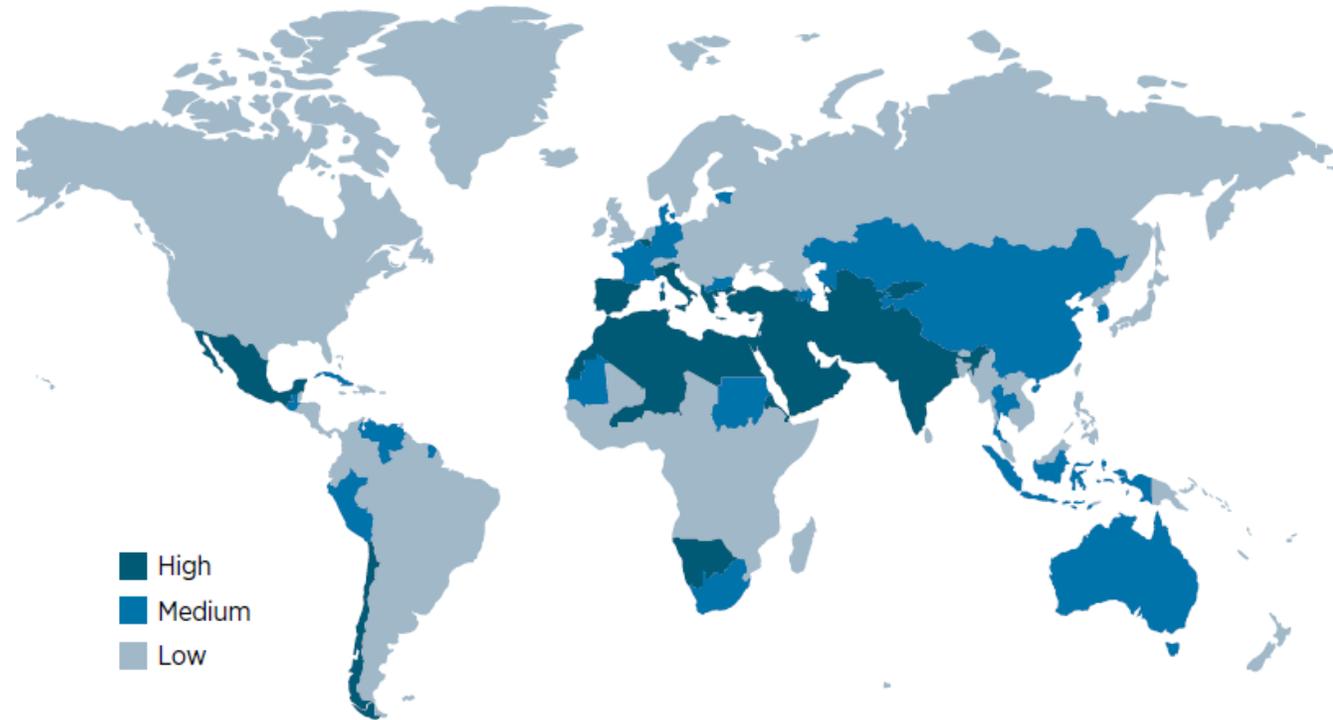
Top producers of critical materials in electrolyzers



Water consumption of hydrogen in 2050 compared with selected sectors today (bn m³)



Heat map of water stress levels



- Hydrogen is part of a much bigger energy transition picture, and its development and deployment strategies should not be pursued in isolation.
- Setting the right priorities for hydrogen use will be essential for its rapid scale-up and long-term contribution to decarbonisation efforts.
- International co-operation will be necessary to devise a transparent hydrogen market with coherent standards and norms that contribute to climate change efforts meaningfully.
- Supporting the advancement of renewable energy and green hydrogen in developing countries is critical for decarbonising the energy system and can contribute to global equity and stability.
- Geopolitical risks can be mitigated by reducing unnecessary energy consumption across many final uses.
- Policy makers should consider broader impacts of hydrogen development on sustainable development to ensure positive, long-lasting outcomes.



International Renewable Energy Agency

Twelfth Session of the Assembly

شكرا لكم

谢谢

Thank you

Merci

Спасибо

Gracias

#IRENA12A #ChooseAction